

REMARKS

Claims 1-14 and 21-25, all the claims pending in the application., stand rejected on prior art grounds. Applicants respectfully traverse these rejections based on the following discussion.

I. The Prior Art Rejections

Claims 1-7 stand rejected under 35 U.S.C. §102(b) as being anticipated by Long, et al. (U.S. Patent No. 5,831,836), hereinafter referred to as Long. Claims 8-14 and 21-25 stand rejected under 35 U.S.C. §102(b) as being anticipated by Howell (U.S. Patent No. 6,605,526 B1). Applicants respectfully traverse these rejections based on the following discussion.

The claimed invention provides an integrated circuit structure comprising a probe pad region adapted to make physical contact with a probe, wherein the probe pad region and an inspection mark are visible from an exterior of the integrated circuit structure. Moreover, the probe pad region and the inspection mark each comprise a portion of a conductive material. In the rejection, the Office Action argues that the prior art of record discloses many features of the claimed invention. However, Long does not teach that the “electrical leads 117” (which the Office Action asserts teaches the claimed “probe pad region”) are visible from an exterior of the integrated circuit structure and are adapted to make physical contact with a probe. Instead, the “electrical leads 117” are covered. The “electrical leads 117” are also *above* the conductive layer; and as such, do not comprise a portion of the conductive layer. Additionally, Howell fails to teach a probe pad region. Instead, Howell merely discloses an opening that does not comprise a portion of a conductive material. Therefore, as explained in greater detail below, Applicants respectfully submit that the prior art of record does not teach or suggest the claimed invention.

Applicants traverse the rejections because the prior art of record fails to teach the claimed probe pad region and inspection mark. More specifically, as defined in independent claims 1, 8, and 21, “said probe pad region is adapted to make physical contact with a probe, wherein said probe pad region and said inspection mark are visible from an exterior of said integrated circuit structure”.

The Office Action argues that the “electrical leads 117” of Long teach the “probe pad region” of the claimed invention (Office Action, p. 2, item 2). Moreover, the Office Action argues that the “surface 115” of Long and the “opening 20” of Howell each teach the “inspection mark” of the claimed invention (Office Action, p. 2, item 2; p. 4, item 3).

However, as illustrated in FIG. 1 of Long, the “electrical leads 117” (which the Office Action asserts teaches the claimed “probe pad region”) are covered by the insulative layer 114, the surface 115, the integrated circuit die 120, the silicone gel 128, and the potting mixture 130. As such, the “electrical leads 117” are not visible from an exterior of the integrated circuit structure and are not adapted to make physical contact with a probe (independent claims 1, 8, and 21).

Further, Applicants submit that the “surface 115” of Long (which the Office Action asserts teaches the claimed “inspection mark”) is covered by the silicone gel 128 and the potting mixture 130. As such, the “surface 115” is not visible from an exterior of the integrated circuit structure (independent claims 1, 8, and 21).

Additionally, the Office Action argues that the “conductive layer 116” of Long teaches the “conductive material” of the claimed invention (Office Action, p. 2, item 1). However, as illustrated in FIG. 1 of Long, the “surface 115” (which the Office Action asserts teaches the

claimed “inspection mark”) is *above* the “conductive layer 116”. As such, Long does not teach an inspection mark that comprises a portion of the conductive material.

In addition, Applicants submit that Howell fails to disclose a probe pad region. Thus, Howell does not teach or suggest a probe pad region that is adapted to make physical contact with a probe and that is visible from an exterior of an integrated circuit structure. Instead, Howell discloses that the need for conductive pads is eliminated (col. 1, lines 21-39).

Referring to FIG. 2 of Howell, the Office Action asserts that the “opening 20” teaches the “inspection mark” of the claimed invention (Office Action, p. 4, item 3). However, Howell does not disclose that the opening 20 and a probe pad region each comprise a portion of a conductive material. Instead, merely discusses the formation of the opening 20. Specifically, as discussed in column 2, lines 60-65 of Howell, when the integrated circuit is ready for the wirebond to be formed, the wirebonding process begins with the application of a laser or other energy source 15 (such as an eximer laser) to ablate or etch the region of the polyimide 14 over the wiring 11. This produces an opening 20.

To the contrary, FIG. 12 of Applicants’ disclosure illustrates a probe pad region 14 that is visible from an exterior of the integrated circuit structure and is adapted to make physical contact with a probe. An inspection mark 20 is also provided that is visible from the exterior of the integrated circuit structure. Moreover, the probe pad region 14 and the inspection mark 20 each comprise a portion of a conductive material 70.

In view of the foregoing, Applicants submit that unlike the claimed invention, Long does not teach that the “electrical leads 117” (which the Office Action asserts teaches the claimed “probe pad region”) are visible from an exterior of the integrated circuit structure and are

adapted to make physical contact with a probe. Instead, the “electrical leads 117” are covered. The “electrical leads 117” are also *above* the conductive layer; and as such, do not comprise a portion of the conductive layer. Additionally, Howell fails to teach a probe pad region. Instead, Howell merely discloses an opening that does not comprise a portion of a conductive material. Therefore, it is Applicants’ position that the prior art of record fails to teach or suggest the claimed features “wherein said probe pad region is adapted to make physical contact with a probe, wherein said probe pad region and said inspection mark are visible from an exterior of said integrated circuit structure, and wherein said probe pad region and said inspection mark each comprise a portion of said conductive material” as defined in independent claims 1, 8, and 21.

Therefore, it is Applicants’ position that the prior art of record does not teach or suggest many features defined by independent claims 1, 8, 21 and that such claims are patentable over the prior art of record. Further, it is Applicants’ position that dependent claims 2-7, 9-14 and 22-25 are similarly patentable, not only because of their dependency from a patentable independent claims, but also because of the additional features of the invention they defined. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections.

II. Formal Matters and Conclusion

In view of the foregoing, Applicants submit that claims 1-7, 8-14, and 21-25, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary. Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 09-0456.

Respectfully submitted,

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